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Metal Industry Indicators

Composite Indexes of Leading and Coincident Indicators of Selected Metal Industries for March and April—Summary Report

May 19, 2006

The **primary metals leading index** increased sharply, 2.6%, to 154.2 in April from a revised 150.3 in March. Its 6-month smoothed growth rate soared to 13.6% from a revised 9.1%. The 6-month smoothed growth rate is a compound annual rate that measures the near-term trend. Usually a growth rate above +1.0% signals an increase in metals activity, and a growth rate below -1.0% indicates a downturn in activity. While the primary metals leading index growth rate increased to a level that would normally indicate robust growth in the metals industry, realistically, domestic metals activity growth will likely accelerate at a more moderate pace in the near future.

Three of the indicators that were available for the April index calculation increased, and one was unchanged from its March level. More than one-half of the index's increase can be attributed to the jump in the JOC-ECRI metals price index growth rate. It contributed 1.5 percentage points to the leading index. The stock price index combining construction and farm machinery companies and industrial machinery companies continued to climb and contributed 0.6 percentage points. The PMI rebounded in April and is still indicating activity growth in the domestic manufacturing industry. It contributed 0.5 percentage points to the leading index. The average workweek in primary metals establishments remained the same as in March. The April leading index should be considered preliminary because only four of its eight indicators were available, and the leading index will likely be revised when the other components are added next month.

Metals are key inputs in durable goods manufacturing and construction, which account for almost a quarter of gross domestic product final sales. Therefore, the primary metals leading index also gives early signals of major changes in activity for the overall U.S. economy (Chart 8).

The primary aluminum and the aluminum mill products indexes are suspended because of discontinued availability of industry-specific historical data. The USGS will continue to calculate the steel and copper composite indexes. These indexes are available through March. The copper leading index increased 1.3% in March, and its growth rate rose into positive territory. With the exception of new housing permits issued, all of the copper leading index's components increased. But, it is the soaring copper price that is primarily pushing the index higher. Nevertheless, the domestic copper industry will likely sustain modest activity growth in the months

directly ahead. The steel leading index eased down slightly, 0.1%, in March. Movements among its indicators were mixed, but it was the soaring S&P stock price index for steel companies that made the largest positive impact on the leading index. However, fewer weekly hours in iron and steel mills in March prevented the leading index from moving higher. The leading index growth rate still indicates that steel activity could grow at a moderate pace in the coming months.

The **metals price leading index** increased 0.4% in March, the latest month for which it is available, to 106.2 from a revised 105.8 in February. Its 6-month smoothed growth rate increased to -0.8% from a revised -1.9% in February. All three of its available indicators made positive contributions to the leading index, reversing declines in February. The growth rate of the trade-weighted average exchange value of other major currencies against the U.S. dollar contributed 0.2 percentage points. An increase in the growth rate of the inflation-adjusted value of new orders for U.S. nonferrous metal products contributed 0.1 percentage point. The yield spread between the U.S. 10-year Treasury Note and the federal funds rate widened slightly, and its contribution rounded to 0.1 percentage point. The fourth component, the growth rate of the Economic Cycle Research Institute (ECRI) 18-Country Long Leading Index, was only available though February. It declined after increasing for 4 consecutive months, however, it is indicating modest-to-moderate growth for most global economies. The ECRI 18-Country Long Leading Index gauges future economic activity for major industrialized countries and signals changes in the growth of economic activity about 5 months in advance. The metals price leading index signals major changes in the growth rate of nonferrous metal prices an average of 8 months in advance.

The growth rate of the inflation-adjusted value of U.S. nonferrous metal products inventories, which is an indicator of supply, increased in March. This indicator usually moves inversely with the price of metals. Speculation over tight global metals supplies, particularly for copper, will likely keep pressure on metals price growth in the immediate future.

The percent changes from February to March for the **metal industry coincident indexes**, which measure current economic activity, are shown below. March is the latest month for which these indexes are available.

Primary Metals	0.5%
Steel	-0.8%
Copper	-0.1%

Tables 1, 3, 5, and 7 identify the indicators and, for the industry indexes, show the contributions of each indicator to its respective index.

The *Metal Industry Indicators* report is produced at the U.S. Geological Survey by the Minerals Information Team. For more information about these indexes and the *Metal Industry Indicators* monthly report, contact Gail James (703-648-4915), (e-mail, gjames@usgs.gov) at the U.S. Geological Survey.

The *Metal Industry Indicators* summary report with indexes for April and May is scheduled for release on the World Wide Web at 10:00 a.m. EDT, Friday, June 16.

Table 1.
Leading Index of Metal Prices and Growth Rates of the Nonferrous Metals Price Index, Inventories of Nonferrous Metal Products, and Selected Metal Prices

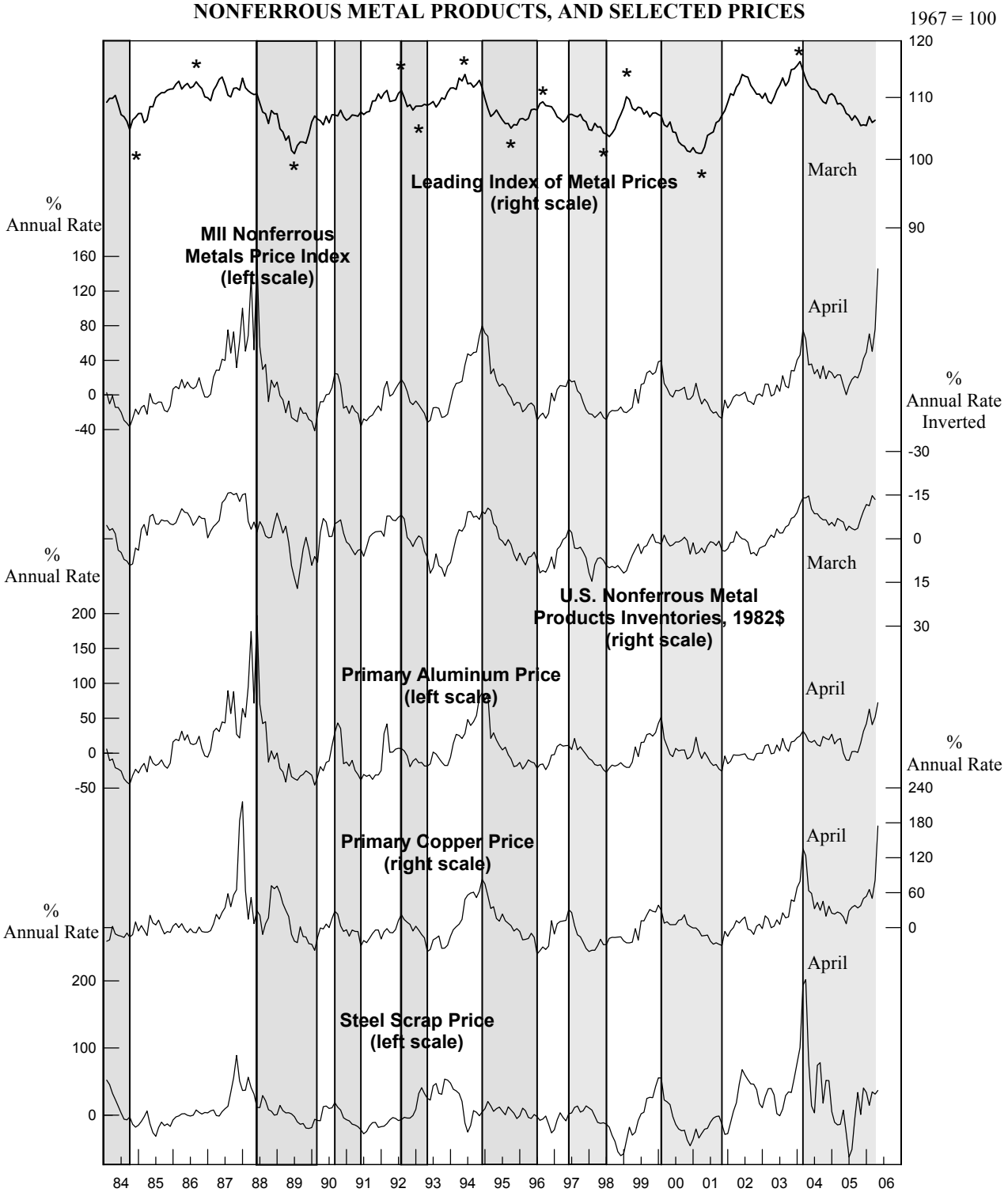
		Six-Month Smoothed Growth Rates				
	Leading Index of Metal Prices (1967=100)	MII Nonferrous Metals Price Index	U.S. Nonferrous Metal Products Inventories (1982$)	Primary Aluminum	Primary Copper	Steel Scrap
2005						
March	109.0	23.2	-6.3	21.0	24.5	-13.4
April	108.5	11.2	-5.7	0.4	18.5	7.4
May	107.3r	0.3	-2.8	-9.9	6.6	-26.8
June	107.0r	10.5	-4.3	-10.3	28.8	-62.3
July	106.2	17.9	-3.5	2.1	34.7	-51.1
August	107.0	21.4	-3.0	2.6	38.1	-4.5
September	106.3r	19.7	-3.6	0.9	33.7	33.7
October	105.3r	28.2	-6.8	14.5	37.5	1.0
November	105.5r	42.0	-9.5r	31.3	49.9	40.5
December	105.3r	49.5	-11.8	42.1	53.7	33.8
2006						
January	106.8r	70.5	-11.3	62.7	65.4	14.9
February	105.8	50.4	-14.8r	40.9	50.1	34.6
March	106.2	76.0	-13.5	51.6	81.4	31.3
April	NA	145.6	NA	72.3	174.4	36.8

NA: Not available **r:** Revised

Note: The components of the Leading Index of Metal Prices are the spread between the U.S. 10-year Treasury Note and the federal funds rate, and the 6-month smoothed growth rates of the deflated value of new orders for nonferrous metal products, the Economic Cycle Research Institute's 18-Country Long Leading Index, and the reciprocal of the trade-weighted average exchange value of the U.S. dollar against other major currencies. The Metal Industry Indicators (MII) Nonferrous Metals Price Index measures changes in end-of-the-month prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange (LME). The steel scrap price used is the price of No. 1 heavy melting. Inventories consist of the deflated value of finished goods, work in progress, and raw materials for U.S.-produced nonferrous metal products (NAICS 3313, 3314, & 335929). Six-month smoothed growth rates are based on the ratio of the current month's index or price to its average over the preceding 12 months, expressed at a compound annual rate.

Sources: U.S. Geological Survey (USGS); American Metal Market (AMM); the London Metal Exchange (LME); U.S. Census Bureau; the Economic Cycle Research Institute, Inc. (ECRI); and Federal Reserve Board.

CHART 1.
LEADING INDEX OF METAL PRICES AND GROWTH RATES OF NONFERROUS METALS PRICE INDEX, INVENTORIES OF NONFERROUS METAL PRODUCTS, AND SELECTED PRICES



Shaded areas are downturns in the nonferrous metals price index growth rate. Asterisks (*) are peaks and troughs in the economic activity reflected by the leading index of metal prices. Scale for nonferrous metal products inventories is inverted.

U.S. Geological Survey, May 2006

Table 2.
The Primary Metals Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2005				
May	138.7	-6.1	99.9	-2.1
June	138.7	-5.6	99.7	-2.4
July	139.5	-4.1	100.0	-1.6
August	141.4	-1.1	101.6	1.5
September	143.5r	1.9	102.9	4.0
October	143.2	1.4	103.3	4.5
November	145.5	4.5r	103.5	4.4r
December	146.6r	5.9r	103.6r	4.3r
2006				
January	148.8	8.6r	105.1	6.7
February	150.8r	10.7r	104.4r	4.8r
March	150.3r	9.1r	104.9	5.1
April	154.2	13.6	NA	NA

NA: Not available **r:** Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

Table 3.
The Contribution of Each Primary Metals Index Component to the Percent Change in the Index from the Previous Month

Leading Index	**March**	**April**
1. Average weekly hours, primary metals (NAICS 331)	0.0	0.0
2. Weighted S&P stock price index, machinery, construction and farm and industrial (December 30, 1994=100)	0.3r	0.6
3. Ratio of price to unit labor cost (NAICS 331)	0.0	NA
4. JOC-ECRI metals price index growth rate	-0.1r	1.5
5. New orders, primary metal products, (NAICS 331 & 335929) 1982$	0.1	NA
6. Index of new private housing units authorized by permit	-0.2	NA
7. Growth rate of U.S. M2 money supply, 2000$	-0.2	NA
8. PMI	-0.2r	0.5
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	-0.3r	2.6

Coincident Index	**February**	**March**
1. Industrial production index, primary metals (NAICS 331)	-0.1r	0.1
2. Total employee hours, primary metals (NAICS 331)	-0.2	0.3
3. Value of shipments, primary metals products, (NAICS 331 & 335929) 1982$	-0.4r	0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	-0.6	0.6

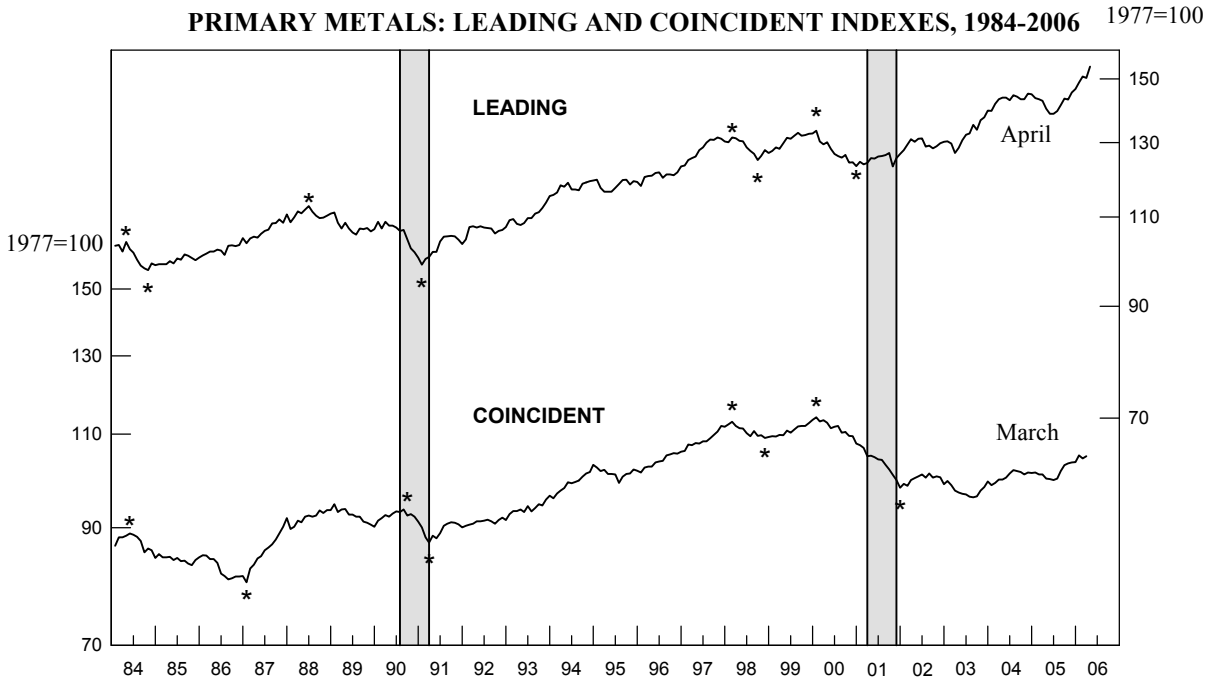
Sources: Leading: 1, Bureau of Labor Statistics; 2, Standard & Poor's and U.S. Geological Survey; 3, U.S. Geological Survey; 4, Journal of Commerce and Economic Cycle Research Institute, Inc.; 5, U.S. Census Bureau and U.S. Geological Survey; 6, U.S. Census Bureau and U.S. Geological Survey; 7, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 8, Institute for Supply Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey; 3, U.S. Census Bureau and U.S. Geological Survey. All series are seasonally adjusted, except 2, 3, and 4 of the leading index.

NA: Not available **r:** Revised

Note: A component's contribution, shown in Tables 3, 5, 7, and 9, measures its effect, in percentage points, on the percent change in the index. Each month, the sum of the contributions plus the trend adjustment equals (except for rounding differences) the index's percent change from the previous month.

CHART 2.

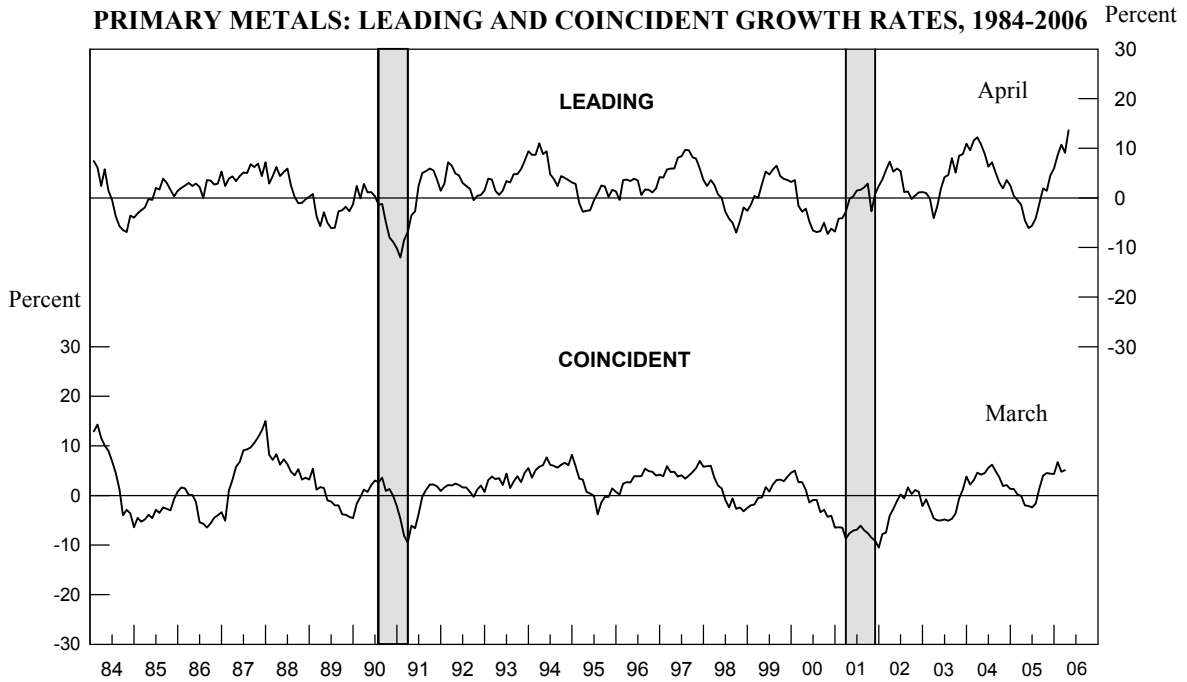
PRIMARY METALS: LEADING AND COINCIDENT INDEXES, 1984-2006



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 3.

PRIMARY METALS: LEADING AND COINCIDENT GROWTH RATES, 1984-2006



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Table 4.
The Steel Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2005				
April	114.0	-3.4	93.6	-2.8
May	112.5	-5.7	93.4	-3.3
June	112.7	-5.2	92.9	-4.1
July	114.2	-2.7	92.1	-5.3
August	114.6	-1.9	93.9	-1.4
September	116.2	1.2	94.4	-0.3
October	116.0	1.0	95.3	1.6
November	118.8	5.5	96.0r	3.1r
December	119.7	6.8	96.9r	4.7r
2006				
January	121.2	9.1	97.6r	6.0r
February	121.2r	8.5r	97.1r	4.8r
March	121.1	7.7	96.3	2.9

r: Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

Table 5.
The Contribution of Each Steel Index Component to the Percent Change in the Index from the Previous Month

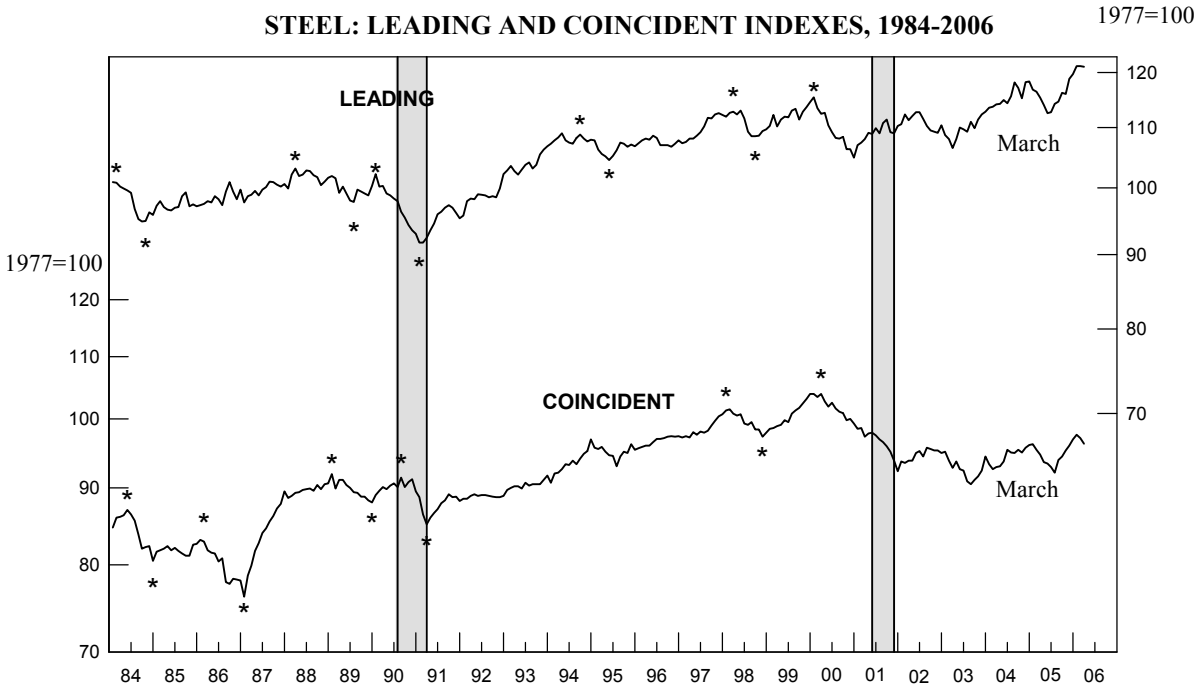
Leading Index	**February**	**March**
1. Average weekly hours, iron and steel mills (NAICS 3311 & 3312)	0.0r	-0.7
2. New orders, iron and steel mills (NAICS 3311 & 3312), 1982$	-0.3	0.0
3. Shipments of household appliances, 1982$	-0.1r	0.4
4. S&P stock price index, steel companies	0.6	0.6
5. Retail sales of U.S. passenger cars and light trucks (units)	-0.3	-0.1
6. Growth rate of the price of steel scrap (#1 heavy melting, $/ton)	-0.2	0.3
7. Index of new private housing units authorized by permit	-0.1	-0.2
8. Growth rate of U.S. M2 money supply, 2000$	0.2	-0.2
9. PMI	0.2	-0.2
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.0r	-0.1
Coincident Index		
1. Industrial production index, iron and steel products (NAICS 3311 & 3312)	0.1	0.0
2. Value of shipments, iron and steel mills (NAICS 3311 & 3312), 1982$	-0.5	-0.2
3. Total employee hours, iron and steel mills (NAICS 3311 & 3312)	-0.1r	-0.8
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	-0.4r	-0.9

Sources: Leading: 1, Bureau of Labor Statistics; 2, U.S. Census Bureau and U.S. Geological Survey; 3, U.S. Census Bureau and U.S. Geological Survey; 4, Standard & Poor's; 5, U.S. Bureau of Economic Analysis and American Automobile Manufacturers Association; 6, Journal of Commerce and U.S. Geological Survey; 7, U.S. Census Bureau and U.S. Geological Survey; 8, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 9, Institute for Supply Management. Coincident: 1, Federal Reserve Board; 2, U.S. Census Bureau and U.S. Geological Survey; 3, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted, except 4 and 6 of the leading index.

r: Revised

CHART 4.

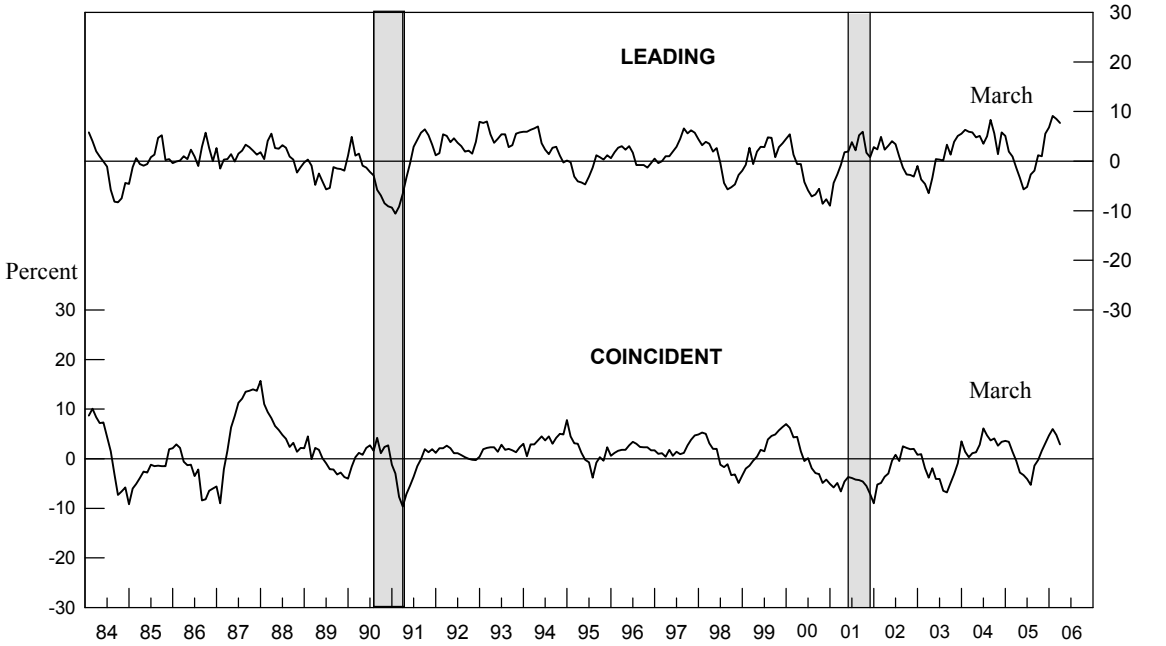
STEEL: LEADING AND COINCIDENT INDEXES, 1984-2006



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 5.

STEEL: LEADING AND COINCIDENT GROWTH RATES, 1984-2006



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Table 6.
The Copper Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2005				
April	128.6	-0.3	109.2	0.1
May	127.2	-2.3	108.6	-0.9
June	128.6	-0.1	110.0	1.7
July	128.9	0.5	112.0	5.2
August	129.1	0.8	110.2	1.8
September	129.6	1.4	109.8	0.9
October	128.6	-0.1	110.1	1.0
November	129.2	0.6	109.9	0.3
December	128.1	-1.0	109.5	-0.8r
2006				
January	128.6	-0.3	109.7r	-0.4r
February	127.6r	-1.6	110.2	0.2r
March	129.2	0.8	110.1	0.1

r: Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

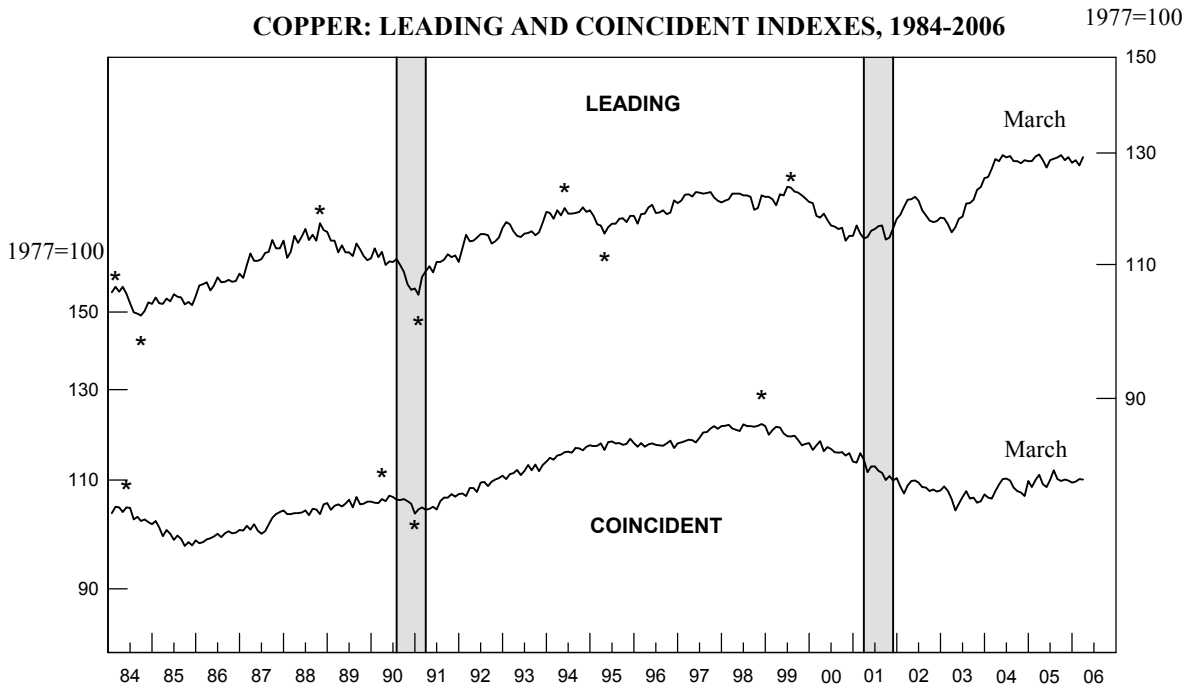
Table 7.
The Contribution of Each Copper Index Component to the Percent Change in the Index from the Previous Month

Leading Index	**February**	**March**
1. Average weekly overtime hours, copper rolling, drawing, extruding, and alloying (NAICS 33142)	-0.4r	0.3
2. New orders, nonferrous metal products, (NAICS 3313, 3314, & 335929) 1982$	-0.2	0.1
3. S&P stock price index, building products companies	0.1	0.3
4. LME spot price of primary copper	-0.1	0.7
5. Index of new private housing units authorized by permit	-0.1	-0.3
6. Spread between the U.S. 10-year Treasury Note and the federal funds rate	0.0	0.0
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	-0.7r	1.1
Coincident Index		
1. Industrial production index, primary smelting and refining of copper (NAICS 331411)	0.6r	-0.2
2. Total employee hours, copper rolling, drawing, extruding, and alloying (NAICS 33142)	-0.3	0.0
3. Copper refiners' shipments (short tons)	NA	NA
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.4r	-0.1

Sources: Leading: 1, Bureau of Labor Statistics; 2, U.S. Census Bureau and U.S. Geological Survey; 3, Standard & Poor's; 4, London Metal Exchange; 5, U.S. Census Bureau and U.S. Geological Survey; 6, Federal Reserve Board and U.S. Geological Survey. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics; 3, American Bureau of Metal Statistics, Inc. and U.S. Geological Survey. All series are seasonally adjusted, except 3, 4, and 6 of the leading index.

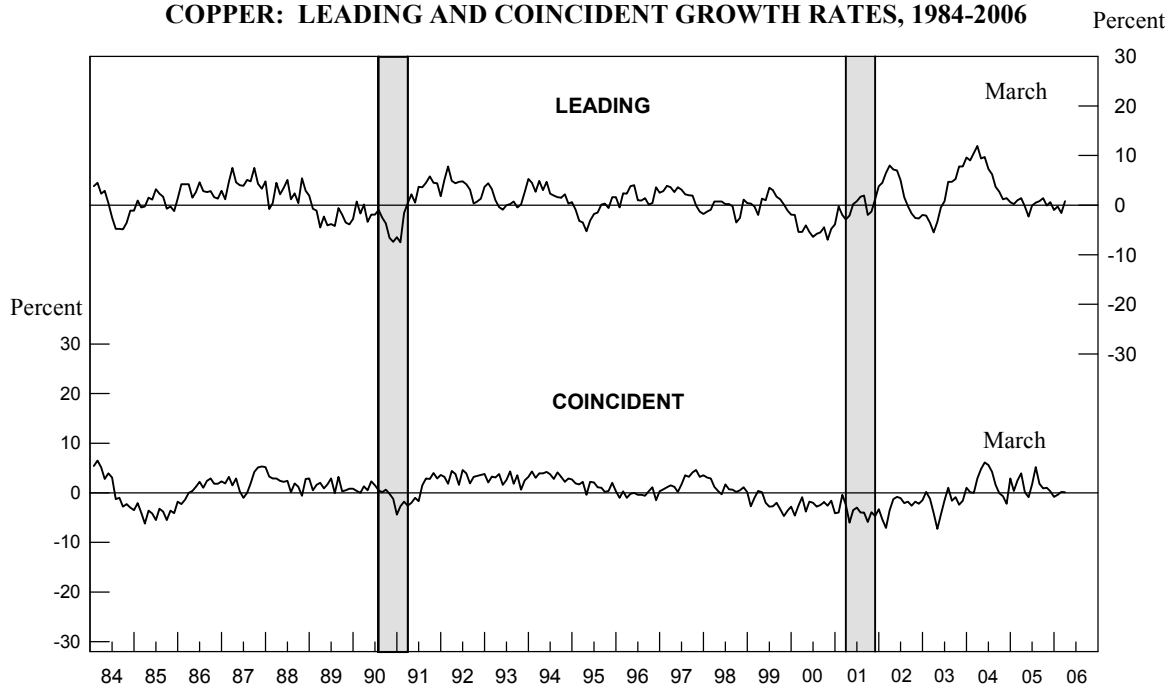
r: Revised NA: Not available

CHART 6.
COPPER: LEADING AND COINCIDENT INDEXES, 1984-2006



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

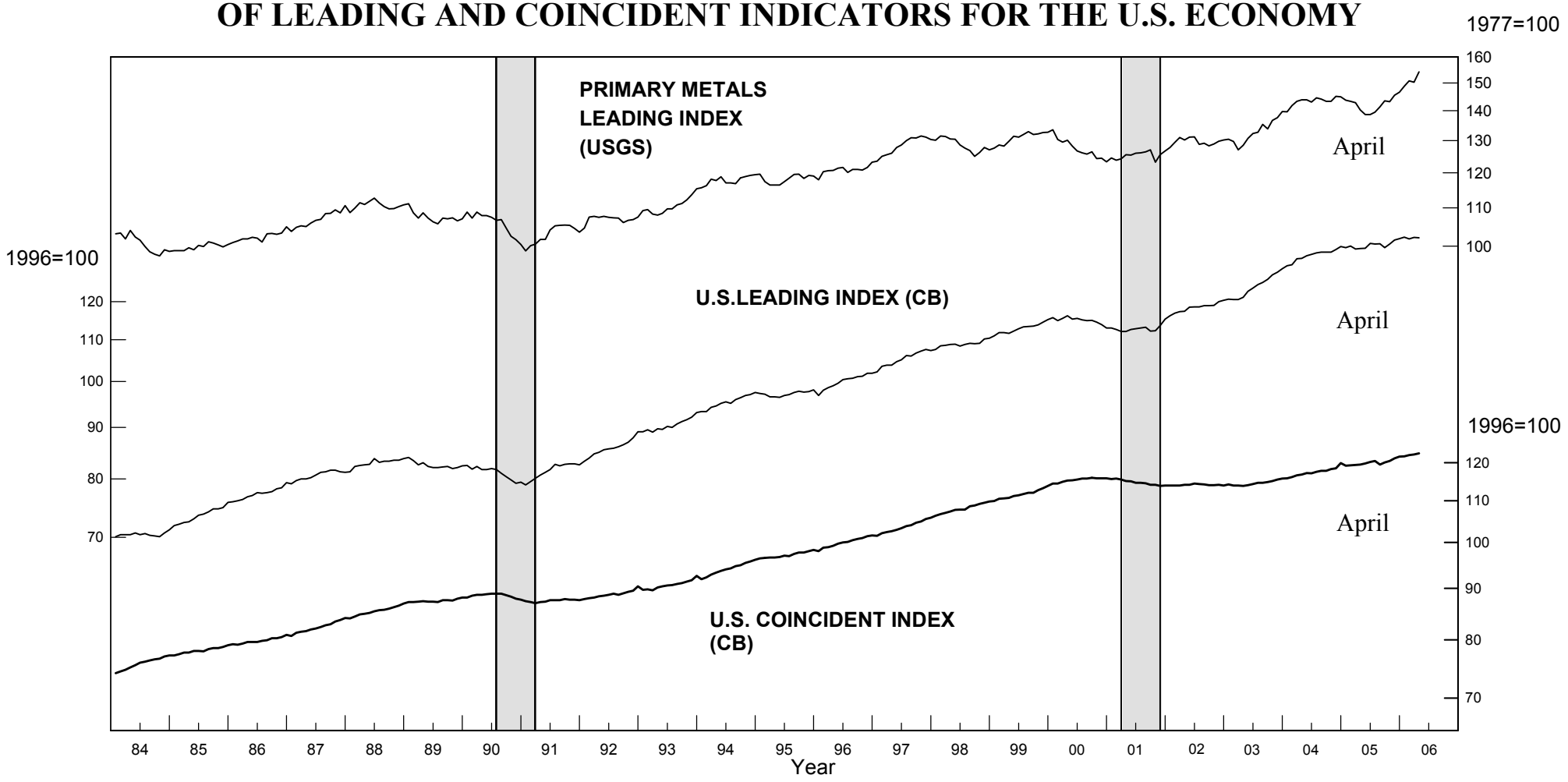
CHART 7.
COPPER: LEADING AND COINCIDENT GROWTH RATES, 1984-2006



Shaded areas are business cycle recessions.
The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Chart 8.

PRIMARY METALS LEADING INDEX AND COMPOSITE INDEXES OF LEADING AND COINCIDENT INDICATORS FOR THE U.S. ECONOMY



Shaded areas are business cycle recessions.

Sources: U.S. Geological Survey (USGS) and Conference Board (CB).

May 2006